

0570
0731

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/602,740

DATE: 07/05/2001

TIME: 11:39:12

Input Set : D:\seqlistcorr.txt

Output Set: N:\CRF3\07052001\I602740.raw

3 <110> APPLICANT: Pompejus, Markus
 4 Kroger, Burkhard
 5 Schroder, Hartwig
 6 Zelder, Oskar
 7 Haberhauer, Gregor
 9 <120> TITLE OF INVENTION: CORYNEBACTERIUM GLUTAMICUM GENES ENCODING PROTEINS
 10 INVOLVED IN CARBON METABOLISM AND ENERGY
 11 PRODUCTION
 13 <130> FILE REFERENCE: BGI-126CP
 15 <140> CURRENT APPLICATION NUMBER: US 09/602,740
 C--> 16 <141> CURRENT FILING DATE: 2001-06-20
 18 <150> PRIOR APPLICATION NUMBER: 60/141,031
 19 <151> PRIOR FILING DATE: 1999-06-25
 21 <150> PRIOR APPLICATION NUMBER: 60/143,208
 22 <151> PRIOR FILING DATE: 1999-07-09
 24 <150> PRIOR APPLICATION NUMBER: 60/151,572
 25 <151> PRIOR FILING DATE: 1999-08-31
 27 <150> PRIOR APPLICATION NUMBER: DE 19931412.8
 28 <151> PRIOR FILING DATE: 1999-07-08
 30 <150> PRIOR APPLICATION NUMBER: DE 19931413.6
 31 <151> PRIOR FILING DATE: 1999-07-08
 33 <150> PRIOR APPLICATION NUMBER: DE 19931419.5
 34 <151> PRIOR FILING DATE: 1999-07-08
 36 <150> PRIOR APPLICATION NUMBER: DE 19931420.9
 37 <151> PRIOR FILING DATE: 1999-07-08
 39 <150> PRIOR APPLICATION NUMBER: DE 19931424.1
 40 <151> PRIOR FILING DATE: 1999-07-08
 42 <150> PRIOR APPLICATION NUMBER: DE 19931428.4
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 55 <151> PRIOR FILING DATE: 1999-07-08
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 60 <150> PRIOR APPLICATION NUMBER: DE 19931634.1
 61 <151> PRIOR FILING DATE: 1999-07-08
 63 <150> PRIOR APPLICATION NUMBER: DE 19932180.9
 64 <151> PRIOR FILING DATE: 1999-07-09
 66 <150> PRIOR APPLICATION NUMBER: DE 19932227.9
 67 <151> PRIOR FILING DATE: 1999-07-09
 69 <150> PRIOR APPLICATION NUMBER: DE 19932230.9
 70 <151> PRIOR FILING DATE: 1999-07-09

ENTERED

see page 5

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Input Set : D:\seqlistcorr.txt

Output Set: N:\CRF3\07052001\I602740.raw

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73 <151> PRIOR FILING DATE: 1999-07-14
75 <150> PRIOR APPLICATION NUMBER: DE 19932973.7
76 <151> PRIOR FILING DATE: 1999-07-14
78 <150> PRIOR APPLICATION NUMBER: DE 19933005.0
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87 <150> PRIOR APPLICATION NUMBER: DE 19942079.3
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90 <150> PRIOR APPLICATION NUMBER: DE 19942086.6
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93 <150> PRIOR APPLICATION NUMBER: DE 19942087.4
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96 <150> PRIOR APPLICATION NUMBER: DE 19942088.2
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99 <150> PRIOR APPLICATION NUMBER: DE 19942095.5
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102 <150> PRIOR APPLICATION NUMBER: DE 19942123.4
103 <151> PRIOR FILING DATE: 1999-09-03
105 <150> PRIOR APPLICATION NUMBER: DE 19942125.0
106 <151> PRIOR FILING DATE: 1999-09-03
108 <160> NUMBER OF SEQ ID NOS: 784
110 <210> SEQ ID NO: 1
111 <211> LENGTH: 828
112 <212> TYPE: DNA
113 <213> ORGANISM: Corynebacterium glutamicum
115 <220> FEATURE:
116 <221> NAME/KEY: CDS
117 <222> LOCATION: (101)..(805)
118 <223> OTHER INFORMATION: RXS02735
120 <400> SEQUENCE: 1
121 gaggagcttc gccacatgga tccagatttg ggctaccagc acgcactatc cggcttgtcc 60
122 agcgtcaagc tggaaaccgt ctaaggagaa atacaacact atg gtt gat gta gta 115
123 Met Val Asp Val Val
124 1 5
125
127 cgc gca cgc gat act gaa gat ttg gtt gca cag gct gcc tcc aaa ttc 163
128 Arg Ala Arg Asp Thr Glu Asp Leu Val Ala Gln Ala Ala Ser Lys Phe
129 10 15 20
131 att gag gtt gtt gaa gca gca act gcc aat aat ggc acc gca cag gta 211
132 Ile Glu Val Val Glu Ala Ala Thr Ala Asn Asn Gly Thr Ala Gln Val
133 25 30 35
135 gtg ctc acc ggt ggt ggc gcc ggc atc aag ttg ctg gaa aag ctc agc 259
136 Val Leu Thr Gly Gly Gly Ala Gly Ile Lys Leu Leu Glu Lys Leu Ser
137 40 45 50
139 gtt gat gcg gct gac ctt gcc tgg gat cgc att cat gtg ttc ttc gcc 307
140 Val Asp Ala Ala Asp Leu Ala Trp Asp Arg Ile His Val Phe Phe Gly

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Input Set : D:\seqlistcorr.txt

Output Set: N:\CRF3\07052001\I602740.raw

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141      55      60      65
143 gat gag cgc aat gtc cct gtc agt gat tct gag tcc aat gag ggc cag 355
144 Asp Glu Arg Asn Val Pro Val Ser Asp Ser Glu Ser Asn Glu Gly Gln
145 70      75      80      85
147 gct cgt gag gca ctg ttg tcc aag gtt tct atc cct gaa gcc aac att 403
148 Ala Arg Glu Ala Leu Leu Ser Lys Val Ser Ile Pro Glu Ala Asn Ile
149      90      95      100
151 cac gga tat ggt ctc ggc gac gta gat ctt gca gag gca gcc cgc gct 451
152 His Gly Tyr Gly Leu Gly Asp Val Asp Leu Ala Glu Ala Ala Arg Ala
153      105      110      115
155 tac gaa gct gtg ttg gat gaa ttc gca cca aac ggc ttt gat ctt cac 499
156 Tyr Glu Ala Val Leu Asp Glu Phe Ala Pro Asn Gly Phe Asp Leu His
157      120      125      130
159 ctg ctc ggc atg ggt ggc gaa ggc cat atc aac tcc ctg ttc cct cac 547
160 Leu Leu Gly Met Gly Gly Glu Gly His Ile Asn Ser Leu Phe Pro His
161      135      140      145
163 acc gat gca gtc aag gaa tcc tcc gca aag gtc atc gcg gtg ttt gat 595
164 Thr Asp Ala Val Lys Glu Ser Ser Ala Lys Val Ile Ala Val Phe Asp
165 150      155      160      165
167 tcc cct aag cct cct tca gag cgt gca act cta acc ctt cct gcg gtt 643
168 Ser Pro Lys Pro Pro Ser Glu Arg Ala Thr Leu Thr Leu Pro Ala Val
169      170      175      180
171 cac tcc gca aag cgc gtg tgg ttg ctg gtt tct ggt gcg gag aag gct 691
172 His Ser Ala Lys Arg Val Trp Leu Leu Val Ser Gly Ala Glu Lys Ala
173      185      190      195
175 gag gca gct gcg gcg atc gtc aac ggt gag cct gct gtt gag tgg cct 739
176 Glu Ala Ala Ala Ala Ile Val Asn Gly Glu Pro Ala Val Glu Trp Pro
177      200      205      210
179 gct gct gga gct acc gga tct gag gaa acg gta ttg ttc ttg gct gat 787
180 Ala Ala Gly Ala Thr Gly Ser Glu Glu Thr Val Leu Phe Leu Ala Asp
181      215      220      225
183 gat gct gca gga aat ctc taagcagcgc cagctctaac aag 828
184 Asp Ala Ala Gly Asn Leu
185 230      235
188 <210> SEQ ID NO: 2
189 <211> LENGTH: 235
190 <212> TYPE: PRT
191 <213> ORGANISM: Corynebacterium glutamicum
193 <400> SEQUENCE: 2
194 Met Val Asp Val Val Arg Ala Arg Asp Thr Glu Asp Leu Val Ala Gln
195 1      5      10      15
197 Ala Ala Ser Lys Phe Ile Glu Val Val Glu Ala Ala Thr Ala Asn Asn
198      20      25      30
200 Gly Thr Ala Gln Val Val Leu Thr Gly Gly Gly Ala Gly Ile Lys Leu
201      35      40      45
203 Leu Glu Lys Leu Ser Val Asp Ala Ala Asp Leu Ala Trp Asp Arg Ile
204      50      55      60
206 His Val Phe Phe Gly Asp Glu Arg Asn Val Pro Val Ser Asp Ser Glu
207 65      70      75      80

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Input Set : D:\seqlistcorr.txt

Output Set: N:\CRF3\07052001\I602740.raw

```

209 Ser Asn Glu Gly Gln Ala Arg Glu Ala Leu Leu Ser Lys Val Ser Ile
210                      85                      90                      95
212 Pro Glu Ala Asn Ile His Gly Tyr Gly Leu Gly Asp Val Asp Leu Ala
213                      100                      105                      110
215 Glu Ala Ala Arg Ala Tyr Glu Ala Val Leu Asp Glu Phe Ala Pro Asn
216                      115                      120                      125
218 Gly Phe Asp Leu His Leu Leu Gly Met Gly Gly Glu Gly His Ile Asn
219                      130                      135                      140
221 Ser Leu Phe Pro His Thr Asp Ala Val Lys Glu Ser Ser Ala Lys Val
222 145                      150                      155                      160
224 Ile Ala Val Phe Asp Ser Pro Lys Pro Pro Ser Glu Arg Ala Thr Leu
225                      165                      170                      175
227 Thr Leu Pro Ala Val His Ser Ala Lys Arg Val Trp Leu Leu Val Ser
228                      180                      185                      190
230 Gly Ala Glu Lys Ala Glu Ala Ala Ala Ala Ile Val Asn Gly Glu Pro
231                      195                      200                      205
233 Ala Val Glu Trp Pro Ala Ala Gly Ala Thr Gly Ser Glu Glu Thr Val
234 210                      215                      220
236 Leu Phe Leu Ala Asp Asp Ala Ala Gly Asn Leu
237 225                      230                      235
240 <210> SEQ ID NO: 3
241 <211> LENGTH: 468
242 <212> TYPE: DNA
243 <213> ORGANISM: Corynebacterium glutamicum
245 <220> FEATURE:
246 <221> NAME/KEY: CDS
247 <222> LOCATION: (101)..(445)
248 <223> OTHER INFORMATION: RXA01626
250 <400> SEQUENCE: 3
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253 acattaccgt ctgaaaaatt tcatacgtag gctaaagagc atg tcg aaa acg atc 115
254                      Met Ser Lys Thr Ile
255                      1                      5
257 atc gtg cgc acc gaa att gaa atc cct gga cac cca acc gcc atc cat 163
258 Ile Val Arg Thr Glu Ile Glu Ile Pro Gly His Pro Thr Ala Ile His
259                      10                      15                      20
261 atc gca gag atg cag gag ctt ccc cca tct gag gct caa ggc ggc gtg 211
262 Ile Ala Glu Met Gln Glu Leu Pro Pro Ser Glu Ala Gln Gly Gly Val
263                      25                      30                      35
265 cag atg tgc aaa atg cag cgc att att gaa cta gca gga act gcc gaa 259
266 Gln Met Cys Lys Met Gln Arg Ile Ile Glu Leu Ala Gly Thr Ala Glu
267                      40                      45                      50
269 ggg gat gtc gtt act ggt gca ggt gtt att ggc gga tct aat ttc cag 307
270 Gly Asp Val Val Thr Gly Ala Gly Val Ile Gly Gly Ser Asn Phe Gln
271                      55                      60                      65
273 ctg aat aac gag cca aat gaa gtg gtt ccc cat cca gat acc tat gcg 355
274 Leu Asn Asn Glu Pro Asn Glu Val Val Pro His Pro Asp Thr Tyr Ala
275 70                      75                      80                      85
277 gat ttc ccc gat atc aag gcg gtt gtt atc tcc gcg gag act ttt gaa 403

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278 Asp Phe Pro Asp Ile Lys Ala Val Val Ile Ser Ala Glu Thr Phe Glu
279          90          95          100
281 ggc ctg tgg ctg gaa gcg gga gcg aag ttc cct ggg tta aat          445
282 Gly Leu Trp Leu Glu Ala Gly Ala Lys Phe Pro Gly Leu Asn
283          105          110          115
285 taaccacttg cagtataccc tag          468
288 <210> SEQ ID NO: 4
289 <211> LENGTH: 115
290 <212> TYPE: PRT
291 <213> ORGANISM: Corynebacterium glutamicum
293 <400> SEQUENCE: 4
294 Met Ser Lys Thr Ile Ile Val Arg Thr Glu Ile Glu Ile Pro Gly His
295   1          5          10          15
297 Pro Thr Ala Ile His Ile Ala Glu Met Gln Glu Leu Pro Pro Ser Glu
298          20          25          30
300 Ala Gln Gly Gly Val Gln Met Cys Lys Met Gln Arg Ile Ile Glu Leu
301          35          40          45
303 Ala Gly Thr Ala Glu Gly Asp Val Val Thr Gly Ala Gly Val Ile Gly
304          50          55          60
306 Gly Ser Asn Phe Gln Leu Asn Asn Glu Pro Asn Glu Val Val Pro His
307   65          70          75          80
309 Pro Asp Thr Tyr Ala Asp Phe Pro Asp Ile Lys Ala Val Val Ile Ser
310          85          90          95
312 Ala Glu Thr Phe Glu Gly Leu Trp Leu Glu Ala Gly Ala Lys Phe Pro
313          100          105          110
315 Gly Leu Asn
316          115
319 <210> SEQ ID NO: 5
320 <211> LENGTH: 780
321 <212> TYPE: DNA
322 <213> ORGANISM: Corynebacterium glutamicum
324 <220> FEATURE:
325 <221> NAME/KEY: CDS
326 <222> LOCATION: (101)..(757)
327 <223> OTHER INFORMATION: RXA02245
329 <400> SEQUENCE: 5
330 gccacaccgc caccgcaccg atgcgatgtt tgtggcagtg ctgcgaaaga agtagacctg 60
332 tgagctaagt ggggtagaca agagggtat gatttagggc atg gca caa cgt act 115
333          Met Ala Gln Arg Thr
334          1          5
336 cca cta atc gcc cca tcc att ctt gct gct gat ttc tcc cgc tta ggg 163
337 Pro Leu Ile Ala Pro Ser Ile Leu Ala Ala Asp Phe Ser Arg Leu Gly
338          10          15          20
340 gag cag gtg ttg gct gtt cct gat gct gac tgg att cac gtc gac atc 211
341 Glu Gln Val Leu Ala Val Pro Asp Ala Asp Trp Ile His Val Asp Ile
342          25          30          35
344 atg gac gga cac ttc gtt cca aac ttg agc ttt ggc gcg gat atc aca 259
345 Met Asp Gly His Phe Val Pro Asn Leu Ser Phe Gly Ala Asp Ile Thr
346          40          45          50

```

FYI:

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

DATE: 07/05/2001

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Input Set : D:\seqlistcorr.txt

Output Set: N:\CRF3\07052001\I602740.raw

L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:9604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107

L:57063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:655

L:57064 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:655

L:57098 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:656